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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,526	07/20/2000	Bruce E. Novich	1596C3	2610

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PPG Industries Inc
One PPG Place
Pittsburgh, PA 15272

EXAMINER

GRAY, JILL M

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/620,526	Applicant(s) NOVICH ET AL.	
	Examiner Jill M. Gray	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-22 and 24-56 is/are pending in the application.
- 4a) Of the above claim(s) 9-12,15-17 and 33-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-8,13,14,18-22,24-32 and 44-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| X Paper No(s)/Mail Date <u>8/5/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The rejection of claims 44, 46 and 51-56 under 35 U.S.C. 103(a) as being unpatentable over Sakaguichi et al, in view of Raghupathi et al, 6,139,958 is withdrawn in view of applicants' arguments.

The rejection of claims 1-3, 5-8, 13-14, 18-32, and 44-56 under 35 U.S.C. 103(a) as being unpatentable over Kotera et al, in view of Raghupathi et al, 6,139,958 is withdrawn in view of applicants' arguments.

The rejection of claims 51-56 under 35 U.S.C. 103(a) as being unpatentable over Hager et al, 5,689,601 (Hager) in view of "Concise Chemical and Technical Dictionary", 4th ed. is withdrawn in view of applicants' arguments.

Remarks

In response to applicants' request for clarification of claims 33-43, these claims are drawn to a non-elected invention, per the election of species in applicants' submission of December 2, 2004. It should be noted that the present listing of claims submitted by applicants indicate said claims as being "withdrawn".

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claims 44, 46, and 51-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaguchi et al, 4,006,272 (Sakaguchi) in view of Quinn et al, 3,322,498 (Quinn) and Japanese patent abstract JP404238810A (Inagaki), both cited to show the state of the art.

Sakaguchi is as set forth previously and teaches glass fiber mats impregnated with a binder. The binder can be applied as a dispersion or used in the dry powder state and uniformly distributed on the glass fiber substrate. When the binder is applied in the dry powder state, a lubricant and inorganic silica particles can be added to improve flowability, per claims 44 and 51-52. See column 4, lines 3-7. The binder is selected from organic materials such as thermoplastic and thermosetting materials as required by claims 53-54 and can be polyester, per claims 55-56. See Examples. Sakaguchi does not specifically identify his silica particles as "lamellar particles". Quinn teaches the formation of lamellar silica that can be used as a thixotropic agent in compositions. Inagaki teaches a lamellar silica-metal oxide porous material which has crosslinking bonds between the "lamellar crystals of the silica tetrahedrons". Applicants' arguments regarding the structure of the silica taught by Sakaguchi has been noted. In particular, applicants have argued that the silica of Sakaguchi is not lamellar and has a three-dimensional crystal lattice wherein the oxygen atoms are "strongly" bonded around the silicon atoms in a tetrahedral manner and thus is distinctly non-lamellar. In view of the teachings of Quinn and Inagaki, the examiner is unconvinced that the silica of Sakaguchi is distinctly non-lamellar. Moreover, Inagaki

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specifically refers to his silica (wherein the crystals of the silica are in a tetrahedral manner) as "lamellar silica".

Therefore, the prior art teachings of Sakaguchi, Quinn and Inagaki would have rendered obvious the invention as claimed in present claims 44, 46, and 51-56.

3. Claims 1-3, 5, 13-14, 18-22, 24-32, and 44-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kotera et al, 4,340,519 (Kotera) in view of Toyooka 3,506,526.

Kotera is as set forth previously and teaches a polyester resin composition that can be applied to various fiber substrates (column 8, lines 9-12). The resin composition can contain conventional lubricating agents (per claim 22) and inorganic lamellar particles such as graphite, (per claims 13-14 and 44-52). See column 8, line 33 and lines 53-57. The composition can be applied to glass products, as required by claim 5. See column 9, line 19. In addition, in Example 25, Kotera teaches that the resin composition can be a powdered coating composition (claim 3) that comprises polyester (claims 25-28 and 53-56), titanium oxide (claim 1), POLYFLOW (claim 1), a crosslinking agent and dibutyl tin dilaurate (claims 31-32), and other components such as silicone oxide or silicone flow improvers wherein the coating is applied electrostatically. Regarding claims 20-21, 24, and 29-30, these claims are drawn to the amount of particles, lubricious materials and film forming material in the composition. It is the examiner's position that it is an established principle of law that a limitation merely with respect to proportions in a composition of matter or process will not support patentability unless such limitation is "critical", wherein the criticality of such limitation must be

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disclosed in the specification or affidavit. *In re Cole*, 140 USPQ 230 (CCPA 1964). In the present case, there is no clear evidence of criticality of the proportions in the present claimed composition. Regarding claim 19, this claim is drawn to the size of the particles. The Federal Circuit has held that when the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. See MPEP 2144. Accordingly, changes in size normally require only ordinary skill in the art and hence are considered routine expedients. Applicants have not demonstrated on this record the criticality of the particle size, whereby said demonstration would render it inappropriate for the examiner to rely on this precedent to support the instant obviousness rejection over claim 19.

Kotera teaches a coating composition of the type contemplated by applicants that can be used to treat glass products used in the formation of windows or lenses, but does not specifically teach that said windows are formed from glass fibers.

Toyooka teaches a transparent panel structure comprising a woven fabric of glass and metal filaments, wherein said transparent panel is used as the front glass in automobiles, show window glass or glass for the window of foodstuff warmers. See abstract and column 1, lines 29-36. In addition, Toyooka teaches that the panel is formed from bundling glass fibers into yarns and weaving. It would have been obvious to coat the treating composition of Kotera on a glass product, wherein said glass product is a window formed from glass fiber yarns that have been woven in to a fabric

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as taught by Toyooka with the reasonable expectation of obtaining glass products having good transparency as taught by Kotera and Toyooka. Regarding claim 18, it is the examiner's position that the woven fabric implies some degree of bending of the strands. One would reasonably presume that said bending would result in some degree of spacing, even if only due to some filament breakage. A coating applied thereto would result in integrating within said spaces and the deposition of the coating and particles within the interstices. Accordingly, the examiner has reason to believe that the particles provide some degree of interstitial spacing between at least one fiber and at least one adjacent fiber. As to whether Kotera teaches "a plurality of discrete particles" it is the position of the examiner that Kotera in Example 25 teaches titanium dioxide and POLYFLOW which are discrete particles.

Therefore, the combined teachings of Kotera and Toyooka would have rendered obvious the invention as claimed in present claims 1-3, 5, 13-14, 18-22, 24-32, and 44-46.

4. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kotera et al, 4,340,519 (Kotera) in view of Toyooka 3,506,526, as applied above to claims 1-3, 5, 13-14, 24-32, and 44-46, further in view of Raghupathi et al, 6,39,958 (Raghupathi) as applied in previous Office Actions.

Kotera and Toyooka are as set forth above but are silent as to the specific type of glass fibers. Raghupathi is as applied in previous Office Actions and teaches that glass fibers of the type contemplated by applicants, such as E-glass and E-glass derivatives can be used in the formation of glass fiber mats that are used to make panels having

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great transparency. It would have been obvious to modify the combined teachings of Kotera and Toyooka by using as the glass fibers E-glass or E-glass derivatives to result in panels/windows that have great transparency.

5. Claims 1-3, 5-8, 18-22, and 24-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hager et al, 5,689,601 (Hager) in view of "Concise Chemical and Technical Dictionary", 4th ed., (hereinafter the dictionary), cited to show the state of the art, further in view of Girgis 5,925,462.

Hager and the dictionary are as applied previously, whereby Hager teaches an at least partially coated glass fiber strand having a coating composition on at least a portion of a surface of at least one of the fibers, the coating comprising a film forming material, a lubricious material, and discrete particles of an acrylic latex material. The dictionary is cited for its teachings that an acrylic latex comprises discrete particles. The film forming material is a polyolefin polymeric material, the lubricious material can be wax and the composition can be aqueous based, as set forth in claims 2-3, 22, 25-26, and 28. In addition, Hager teaches that the lubricious material can be present in amounts of approximately 5% paraffin wax emulsion, and the particle size is within applicants' range as set forth in claims 19 and 24, further teaching that the particles are present in an amount contemplated by applicants in claims 20-21. See column 3, lines 21-33 and column 4, lines 43-44. Hager does not specifically teach that the lubricious particle material comprises from 1 to 50 weight percent of the resin coating on a total solids basis.

Girgis teaches glass fiber strands for reinforcement of optical fibers, said glass fiber strands having a coating composition on at least a portion of the surface of at least one of the fibers. In addition, Girgis teaches that his coating composition comprises a plurality of discrete particles and at least one lubricious material and film former, per claim 1 and that the glass fibers are of the type contemplated by applicants in claims 6-8 such as E-glass and derivatives thereof. See columns 3-7, column 8, lines 43-50, column 9, lines 40-55, column 10, lines 1-3, and column 10, line 65 through column 11 and line 3. As to claims 31 and 32, Girgis teaches the inclusion of a resin reactive diluent that is a lubricant comprising one or functional groups of the type set forth by applicants. See column 8, lines 51-65. In addition, Girgis teaches the presence of at least one lubricious material in an amount of about 1 to about 10 weight percent of the coating on a total solids basis, which is within applicants' claimed range. Note column 8, line 46 and column 9, line 54. It would have been obvious to modify the composition of Hager by incorporating the lubricant in his composition in an amount of 1% by weight of the coating on a total solids basis, as contemplated by applicants and taught by Girgis in order to enhance processing of the glass fibers and strand. In addition, Girgis teaches a composition that is substantially similar to that taught by Hager and contemplated by applicants. Regarding claim 24, it is the examiner's position that it is an established principle of law that a limitation merely with respect to proportions in a composition of matter or process will not support patentability unless such limitation is "critical", wherein the criticality of such limitation must be disclosed in the specification or affidavit. *In re Cole*, 140 USPQ 230 (CCPA 1964). where the general conditions of a

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claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In addition, there is no clear factual evidence on this record of criticality or unexpected results or properties of the coated glass strand, said criticality or unexpected results or properties being directly related to the amount of lubricious material added to the composition, particularly when said amount ranges from as low as 1% by weight of the coating on a total solids basis to amounts of 50% by weight of the coating on a total solids basis. Regarding claim 18, since the compositions of Hager and Girgis are substantially similar to that contemplated by applicants, and applied to a fiber strand, also as contemplated by applicants, the examiner has reason to believe that the plurality of particles provide an interstitial space between at least one fiber and at least one adjacent fiber.

Therefore, the combined teachings of Hager, the dictionary and Girgis would have rendered obvious the invention as claimed in present claims 1-3, 5-8, 18-22 and 24-32.

6. Claims 1-3, 5-8, 18-22 and 24-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girgis 5,925,462, as applied above to claims 1-3, 5-8, 18-22 and 24-32.

Girgis is as applied above and teaches an at least partially coated fiber strand comprising a plurality of fibers having a coating composition on at least a portion of a surface of at least one of the fibers, wherein the coating composition comprises a plurality of discrete particles, at least one lubricious material different from said plurality of discrete particles, a film former and wherein the plurality of fibers are glass fibers of

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the type contemplated by applicants. Girgis does not teach the average particle size of his particles as required by claim 19. In this regard, the composition of Girgis is substantially similar to that contemplated by applicants except for Girgis' silence to his particle size. It is the examiner's position that the Federal Circuit has held that when the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. See MPEP 2144. Accordingly, changes in size normally require only ordinary skill in the art and hence are considered routine expedients. Applicants have not demonstrated on this record the criticality of the particle size, whereby said demonstration would render it inappropriate for the examiner to rely on this precedent to support the instant obviousness rejection over claim 19.

Therefore, the teachings of Girgis would have rendered obvious the invention as claimed in present claims 1-3, 5-8, 18-22 and 24-32.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 51 and 52 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 and 19 of U.S. Patent No. 6,949,289 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the inventions of present claims 51 and 52 are obvious variations of the invention defined in patented claims 1-3 and 19. In particular, the presumption is that the coating composition of the instant invention of the end product could have some degree of powdered texture. Alternatively, the state of the coating, i.e. whether aqueous or powdered would have been obvious to determine commensurate with the desired application process. For example pultrusion could require an aqueous composition and spray coating could use a powdered coating. The instant invention does not include specific proportions of the amount of particles in the claimed invention and thereby obviates any amount of particles and it would have been obvious to use a polymeric material as a film former. Accordingly, the claimed invention in the present application is obvious over a claimed invention of the patent.

Response to Arguments

9. Applicant's arguments with respect to claims 1-3, 5-8, 13-14, 18-22, 24-32, and 44-56 have been considered but are moot in view of the new ground(s) of rejection.

No claims are allowed.

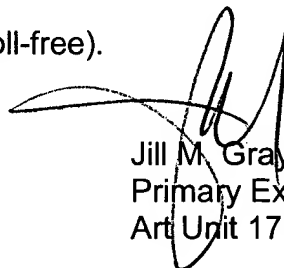
Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jill M. Gray
Primary Examiner
Art Unit 1774

jmg